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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,385	07/02/2003	Kazushige Hotta	1324.68135	3186

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EXAMINER

HU, SHOUXIANG

ART UNIT PAPER NUMBER

2811

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

4A

Office Action Summary

Application No.

10/612,385

Applicant(s)

HOTTA ET AL.

Examiner

Shouxiang Hu

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 1-15, 18-20, 22 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16, 17, 21 and 24-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/22/04 & 12/10/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 1-15, 18-20, 22 and 23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, in view of the previous office action and the 12-10-2004 amendment.

Accordingly, claims 1-26 are pending in this application; and claims 16, 17, 21 and 24-26 remain active in this Office action.

Claim Objections

2. Claims 16, 17, 21 and 24-26 are objected to because of the following informalities and/or defects:

Newly amended claim 16 recites the subject matter that the recited first insulation film only formed on channel region and the low density impurity regions. However, full support for it cannot be found in the original disclosure, as the recited first insulation film is readable as the gate insulating layer in the instant invention, which is normally and/or commonly extended to other regions such as the regions under the gate line, instead of being restricted only in the active region of the thin film transistor (TFT).

In claim 25, the term of "the first thin film transistor devices" lacks a sufficient antecedent basis in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 16, 17, 25 and 26, insofar as being best understood in view of the claim objections above, is rejected under 35 U.S.C. 102(b) as being anticipated by Takemura (US 5,719,065).

Takemura discloses active matrix addressed display (AMAD) device having a thin film transistor (TFT) device with a first conductive type TFT (Figs. 2, 3G-3H, 5 and 10), comprising: a substrate underlying a semiconductor layer including source and drain regions (110, 113) and low density impurity regions (111, 112) with a channel region therebetween; a first insulation film (104') formed on the channel region and the low density impurity regions; a gate electrode (105); and a second insulation film (114).

Regarding claims 17, 25 and 26, it is noted that all the recited features in these claims are naturally company comprised in an AMAD such as the one of Takemura (See Figs. 5 and 10).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 2811

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 21 and 24, insofar as being in compliance with 35 U.S.C. 112, as being supported by the elected species and as being best understood in view of the claim objections above, are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura in view of Applicant's admitted prior art ("AAPA").

The disclosure of Takemura is discussed as allied to claims 16, 17, 25 and 26.

Although Takemura does not expressly disclose that the thickness of the second insulation film and the first insulation film can be optimized so as to have a substantially uniform reflectivity for the source and drain regions and the low density impurity regions, one of ordinary skill in the art would readily recognize that the dopant activation can be readily performed through a process of laser annealing which is naturally strongly correlated with the reflectivity thus the thickness of each of the effective transparent insulation layers, as evidenced in the AAPA (see Fig. 14)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device of Takemura with the thickness of the first and second insulation films being optimized, per the teachings of AAPA, so as to have minimum laser light reflection from each of the source and drain regions and the low density impurity regions, so that a thin film transistor device made through an efficient dopant activation process would be obtained. And, with the laser light reflection being minimized for each of the source and drain regions and the low density impurity regions, the degrees of the laser light reflection from these regions would be naturally substantially equal to each other.

Response to Arguments

7. Applicant's arguments with respect to the above rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shouxiang Hu whose telephone number is 571-272-1654. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

Art Unit: 2811

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH
February 23, 2005

A handwritten signature in black ink, appearing to read 'Shouxiang Hu', written in a cursive style.

SHOUXIANG HU
PRIMARY EXAMINER